



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/075,940	02/13/2002	David C. Brown	GSI.6689-A	9836

7590

06/28/2005

WILLIAM E. HILTON
SAMUELS, GAUTHIER & STEVENS
225 FRANKLIN STREET
SUITE 3300
BOSTON, MA 02110

EXAMINER

JONES, JUDSON

ART UNIT	PAPER NUMBER
----------	--------------

2834

DATE MAILED: 06/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/075,940

Applicant(s)

BROWN ET AL.

Examiner

Judson H. Jones

Art Unit

2834

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1 and 7-12 is/are rejected.
- 7) ☒ Claim(s) 2-6 and 13-17 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 February 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 650205- 5/20/05
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION***Claim Interpretation***

The most common usage of the term “bearing seat” is used for ball bearings enclosed in a race. The bearing seat is the part of the device into which the race is pressed. See Cahill et al. 3,688,370 column 3 lines 48-57. Here the bearing surfaces are the inner parts of the race and the ball bearings, not the bearing seat. A less common usage is shown in Swearington 4,695,585 column 1 lines 66-68 where a rotating shaft is held in position by fixed members 12 and 14. A pressurized lubricant is fed to the surfaces where the shaft and the fixed members are close to one another with these surfaces being called bearing seats. Here the bearing surfaces are the shaft and the bearing seat with the bearing being the fluid. Applicant is using the word “seat” like Swearington with the seat being a bearing surface. On page 12 of the specification the terminology used is “... supported in a fixed member 40 that includes a spherical raceway or socket for forming a seat ...”

Claim Objections

Claims 5 and 7 are objected to because of the following informalities: Claim 1 recites “a movable member ... said second side including an outer bearing surface.” Claims 5 and 7 recite “the movable member comprises an outer spherical bearing surface ...” If applicant is claiming only one bearing surface using different terminology, this needs to be made clear in the claims. One possible wording for claims 5 and 7 is “the outer bearing surface of the movable member comprises a spherical bearing surface ...” Appropriate correction is required.

Claim Rejections - 35 USC § 102

Art Unit: 2834

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 7-9 and 12 are rejected under 35 U.S.C. 102(e) as being anticipated by Hirose 6,249,367 (cited by Applicant).

Hirose discloses an apparatus having a magnetically permeable movable member 2 having a first top side and second bottom side as shown in figure 3, a fixed member 5, a fluid bearing between the fixed and movable members and windings 8 and magnetic elements 3q, 3p fixedly attached to the movable member.

In regard to claim 7, the longitudinal axis is viewed as being along the long side of the movable member 2.

In regard to claim 8, see Hirose column 1 lines 6-9.

In regard to claim 9, see Hirose column 3 lines 28-32.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Art Unit: 2834

Claims 10 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hirose in view of Fearnside 4,264,809. Hirose discloses the apparatus but does not disclose means for determining the orientation of the movable member. Fearnside teaches feedback in column 1 lines 45-51.

In regard to claim 11, see Fearnside column 1 lines 49-55.

Allowable Subject Matter

Claims 2-6 and 13-17 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

The prior art of record does not disclose or teach a coefficient of friction in combination with magnetic tractive forces to clamp a movable element in position in combination with the other features of claim 2. The prior art of record does not disclose or teach providing mutually perpendicular forces in response to drive currents in combination with the other features of claim 5. The prior art of record does not disclose or teach providing a desired coefficient of friction between the bearing surface and the bearing seat for clamping in combination with the other features of claim 13. The bearing used by Hirose is an air bearing and air bearings do not provide a clamping force.

Art Unit: 2834

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Judson H. Jones whose telephone number is 571-272-2025. The examiner can normally be reached on 8-4:30 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Darren Schuberg can be reached on 571-272-2044. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Judson Jones 6/24/2005



DARREN SCHUBERG
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800